3.2B WS Name _____Per ____

1. You invest $20,000 into a Roth IRA that has an annual interest rate of 10% compounded quarterly. Approximately how long will it take you to get to $1,000,000?

2. Which scenario is better? A) Investing $15,000 at 8% compounded continuously for 10 years, or B) Investing $10,000 at 9% compounded quarterly?

3. You start investing at age 25. You found a fund that will give you 10% interest compounded annually. How much do you need to invest each month to get ≈$2,000,000 by age 65?

Graph the following functions.

4. $f(x) = -3 * 4^{x+1} - 3$

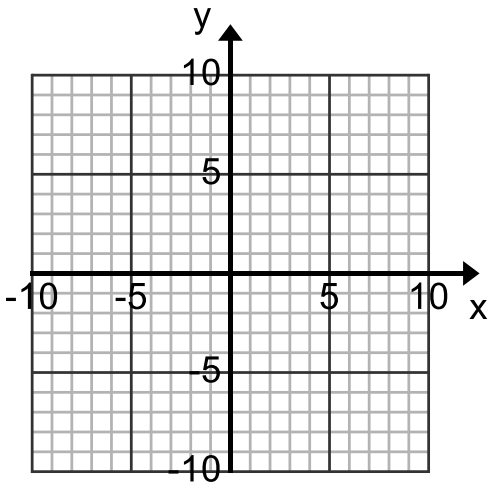
Parent function _____ x | y

Description of transformation x | y

y-int _____ asymptote _____

Domain _____

Range _____



5. $f(x) = \frac{1}{2}\log_3(-\frac{1}{2}x + 1) + 3$

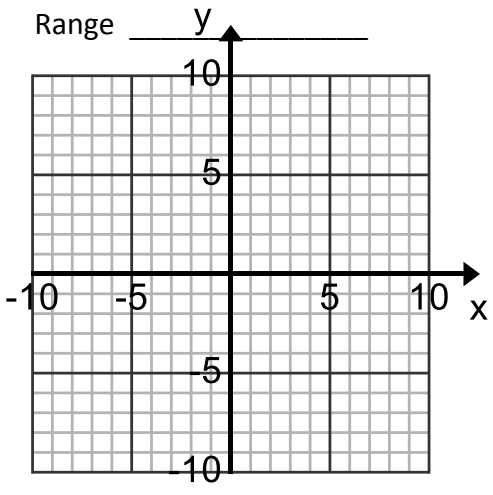
Parent function _____ x | y

Description of transformation x | y

y-int _____ asymptote _____

Domain _____

Range _____



6. $f(x) = -\log_2(x+3) - 1$

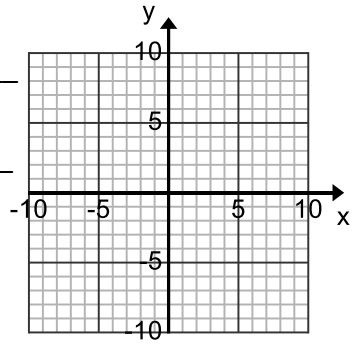
Parent function _____ x y

Description of transformation x y

y-int _____ asymptote _____

Domain _____

Range _____



7. $f(x) = 2^{2x+6} + 2$

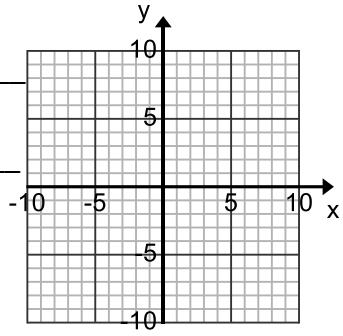
Parent function _____ x y

Description of transformation x y

y-int _____ asymptote _____

Domain _____

Range _____



8. $f(x) = 2e^{x-1} - 3$

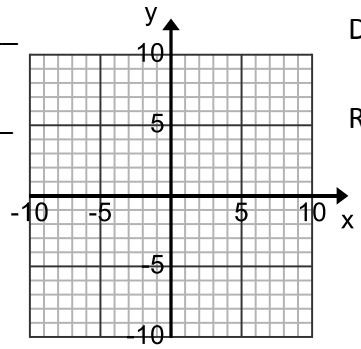
Parent function _____ x y

Description of transformation x y

y-int _____ asymptote _____

Domain _____

Range _____



9. $f(x) = \ln(x+2) - 2$

Parent function _____ x y

Description of transformation x y

y-int _____ asymptote _____

Domain _____

Range _____